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ABSTRACT

Assuming that different programs for communication apprehensive/avoidant students attract different types of students according to their needs and apprehension types, a study examined the relationship between communication apprehension (CA) and general people orientations, as measured by the Personal Record of Communication Apprehension-24 (PRCA-24) and by the Fundamental Interpersonal Relations Orientations-B (FIRO-B), respectively. The study predicted that apprehension about communicating in public speaking situations would demonstrate a larger association with control needs than would apprehension about communicating in dyadic situations. The association between CA for the dyadic subcomponent and inclusion needs was predicted to be greater than the comparable association of inclusion needs with the public speaking subcomponent of the PRCA-24. Subjects were students enrolled in sections of several different speech communication classes. Results indicated a small to moderate correlation between the PRCA-24 and five of the six scales of the FIRO-B, suggesting a modest relationship between CA and people orientations. The results do not appear to support previous explanations that students enrolled in a program developed for public speaking anxiety should be more distinguished by differences in control scores on the FIRO-B. In fact, the subcomponent of the PRCA-24 measuring public speaking apprehension was the context least associated with any of the scales of the FIRO-B. (Tables of data are included.) (Author/FL)

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COMMUNICATION APPREHENSION AND PEOPLE ORIENTATIONS

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Abstract: Operating on the assumption that different educational programs for assisting "communication apprehensive/avoidant" students attract different types of students, according to general needs and strategies for interacting with others, the relationship between communication apprehension, as measured by the PRCA-24, and general people orientations, as measured by the FIRO-B, was examined. It was predicted that apprehension about communicating in the public speaking situation would demonstrate a larger association with control needs than would be the case for the association between apprehension about communicating in dyadic situations and control needs. The association between CA for the dyadic subcomponent and inclusion needs was predicted to be greater than the comparable association of inclusion needs with the public speaking subcomponent of the PRCA-24. The public speaking subcomponent of the PRCA-24 did show a significant relationship with control needs, though the relationship accounted for less than 2% of the common variance and was smaller than the comparable association of the dyadic subcomponent with inclusion. The dyadic subcomponent of the PRCA-24 demonstrated a larger significant association with both control and inclusion needs. Secondary analyses of long term PRCA-24 data for a special speech confidence building program, which focuses on apprehension about public speaking, suggested that students participating in the program may be more generally "communication apprehensive/avoidant" in situations other than public speaking, thus challenging the initial assumption on which the study was based. The relevance of general interpersonal needs, and especially the FIRO-B, to assisting communication apprehensive students is discussed.

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Recent developments in the study of communication apprehensive/avoidant persons have emphasized the importance of clearly defining what we mean when we say "reticence" or "communication apprehension". Leary (1983) has effectively argued that the differences do make a difference. The most recent reconceptualization of the CA construct (Richmond & McCroskey, 1985) makes a distinction between the internal state, e.g., communication apprehension or willingness to communicate, and the outer behaviors (shyness). These theoretical differences are probably not yet well integrated into the helping and teaching of communication apprehensive/avoidant students (most instructional programs use a combination of different techniques (Hoffman & Sprague, 1982)), and criticisms have been raised (Neer, 1982; Page, 1980) concerning the need for greater care in identifying and prescribing treatment for students in special classes and programs.

The study reported in this paper began as an attempt to understand some of the characteristics of students enrolling in a special section of public speaking for speech anxious students at our school. Other efforts have attempted to identify general characteristics of communication apprehensive/avoidant persons (McCroskey, Daly, & Sorensen, 1976; Rosenfeld & Plax, 1976), but they do not seem to be associated with ongoing instructional programs. Specifically, we were interested in whether students in the special section class differed from students enrolling in the regular sections of public speaking according to their needs for communication as defined by Schutz (1966) and operationalized in the FIRO-B (1977). A previous investigation by Rosenfeld and Frandsen (1972) had suggested that two of the FIRO-B's six scales, expressed inclusion and expressed affection, were most predictive in distinguishing "reticent" and "non-reticent" students. They demonstrated that reticent students had lower scores than non-reticents on expressed and wanted inclusion as well as on expressed control and expressed affection. The difference between expressed and wanted control, as well as the difference between expressed and wanted affection, were greater for reticent students than for non-reticents.

In an attempt to replicate the Rosenfeld and Frandsen finding with a different treatment program, Ambler (1983) compared the FIRO-B scores of students enrolled in a special treatment program designed for speech anxious students with those of students enrolled in the speech communication class which the special treatment program supported, a public speaking class. The results indicated no difference between "speech anxious" and "non speech anxious" students except on expressed and wanted control. The speech anxious students had higher scores on wanted control and lower scores on expressed control, thus making the difference between expressed and wanted control greater for anxious versus non anxious students. This aspect of the results was consistent with the Rosenfeld and Frandsen (1972) study, but the earlier study had found the greatest difference between reticents and non-reticents for expressed inclusion and expressed affection. Moreover, another study by the same authors (Frandsen & Rosenfeld, 1973), demonstrated that compatability scores based on the control dimension of the FIRO-B were not predictive of communicative behaviors. Ambler theorized that the difference in results might be attributable to a difference in selection of students. Specifically, he suggested

that since the Rosenfeld and Frandsen (1972) study was based on a program designed to reduce reticence (Phillips, 1968; Phillips & Metzger, 1973), a more general construct, and since his own results were based on a program for students with apprehension about public speaking, that it was possible that people who are more focally anxious about public speaking would be best characterized by their tendencies to avoid influencing others and to seek influence from others while people who are reticent would be better characterized by their lower expression of inclusion and affection. This explanation was consistent with the prediction by Powell and Bock (1975) that students in a public speaking class would change on differences between expressed and wanted control while students in an interpersonal communication class would change on differences in expressed versus wanted inclusion and affection as the result of taking a speech communication class. The assumption implicit in Ambler's explanation was that an instructional program focusing on reticence would attract and select a different student population than a comparable program for public speaking anxiety.

The purpose of the present study is to test a corollary of Ambler's explanation of the difference in results for the two studies. If the previously mentioned explanation is correct, one would expect a greater negative association between apprehension about public speaking anxiety and expressed control, as well as a greater positive association between public speaking apprehension and wanted control, than would attain for the comparable associations of the control scales with apprehension about communicating in less public situations, e.g., groups, meetings, dyads. Similarly, the explanation would also suggest that a greater negative association should be demonstrated between apprehension about communicating in a conversation or dyad and both expressed inclusion and affection than would be the case for the comparable associations with public speaking apprehension.

METHOD

During the second or third week of the quarter, students enrolled in sections of several speech communication classes, including classes in business and professional speaking, public speaking, interpersonal communication, and a special public speaking class for highly apprehensive students, were asked to complete the PRCA-24, the most recent form for measuring general communication apprehension, and the FIRO-B. The PRCA-24 (McCroskey, 1982) is a 24 item measure of trait communication apprehension with a range from 24 to 120. It consists of six items for each of four communication contexts, group, meeting, dyadic, and public speaking, and subcomponent scores can be calculated for each of these contexts. Each of these subcomponent scores have a range from 6 to 30. The FIRO-B (Schutz, 1977) is a measure of a person's "need" to communicate for three different purposes: Inclusion, the need to be part of a group in general, Control, the need to influence or be influenced, and Affection, the need to be close to others. Each need area is hypothesized to have both an overt (expressed), and a more latent (wanted) element. Thus, expressed inclusion measures the tendency to reach out to others to make contact, while wanted inclusion measures the tendency to respond to others' efforts to reach out. The FIRO-B is a 54 item test with 9 items for

each of the six scales: expressed inclusion (EI), wanted inclusion (WI), expressed control (EC), wanted control (WC), expressed affection (EA), and wanted affection (WA). Guttman scaling was used in the development of the test and the scores for each of the scales can vary from zero to nine with higher scores representing a greater amount of a given need.

No prediction of the relationship between overall CA and the FIRO-B was made, though we suspected that several of the FIRO-B scales would correlate significantly with the PRCA-24. The FIRO scale that had not distinguished significantly between either "reticent" and "non reticent" students or "speech anxious" and "non speech anxious" students in the two previous studies was wanted affection, so we had reason to believe it might not correlate significantly with the PRCA-24. We did expect a significant relationship between the public speaking subcomponent (PS-CA) of the PRCA-24 and both control scales for the FIRO-B, EC and WC. We further expected that the association between PS-CA and the control scales would be larger than the comparable relationships between the dyadic subcomponent (CNV-CA) of the PRCA-24 and the FIRO control scales. The correlation of PS-CA with EC and WC was also expected to be significantly greater than the correlation of the group CA subcomponent (GRP-CA) with the EC and WC scales. No similar prediction was made of the meeting CA subcomponent (MTG-CA) since we intuitively suspected that communicating in a meeting might elicit feelings more similar to the feelings experienced in public speaking than any of the other subcomponents, though we had no empirical evidence to support this position at the time.

CNV-CA and GRP-CA of the PRCA-24 were expected to correlate positively and significantly with EI and EA. Their relationship with EI and EA was expected to be larger than the correlation of PS-CA with EI and EA. No predictions were made about the relative size of the correlation of MTG-CA with EI or EA, though we intuitively expected that it would be closer to the pattern of associations demonstrated by PS-CA.

In analyzing the data, we chose to calculate the Pearson r between each subcomponent of the PRCA-24, as well as total PRCA-24, and the six scales of the FIRO-B. The t test associated with the r value could then be calculated to determine the statistical significance of the correlations. In comparing correlations across subcomponents, a test of the difference between two correlation coefficients for correlated samples (Ferguson, 1971, p. 171) was used.

RESULTS

Reliability of Measures

The reliability estimates (Cronbach's alpha) for the subcomponents of the PRCA-24 were uniformly high: GRP-CA, .88; MTG-CA, .90; CNV-CA, .89; and PS-CA, .89. The reliability estimate for the overall PRCA-24 was .95. All of these figures are comparable to previous estimates reported by McCroskey (1982).

The reliability estimates (Coefficient of Reproducibility) for the scales of the FIRO-B were as follows: EI, .87; WI, .90; EC, .89; WC, .88; EA, .90; WA, .91. A coefficient of reproducibility of .90 or higher is usually desirable. The coefficients of scalability for the scales were: EI, .42; WI, .69; EC, .55; WC, .46; EA, .64; and WA, .64. A value of .6 or higher is usually recommended for these coefficients.

Primary Results

Table 1 shows the intercorrelations of the the subcomponents of the PRCA-24 and the six scales of the FIRO-B for the entire sample. As predicted, PS-CA, was significantly correlated with both expressed control, $r = -.11$, $p<.05$, and wanted control, $r = .14$, $p<.01$. Counter to expectations, these associations are not larger than the comparable associations of the other context measures of apprehension with EC and WC. In fact, expressed and wanted control show the lowest correlation with the public speaking subcomponent of the PRCA-24. Comparisons of the difference in correlation sizes demonstrate that EC is more highly associated with GRP-CA, $t(318) = 2.27$, $p<.05$, MTG-CA, $t(318) = 2.96$, $p<.01$), and CNV-CA, $t(318) = 2.95$, $p<.01$, than it is PS-CA. Similarly, there is a larger association between WC and MTG-CA, $t(318) = 3.58$, $p<.001$, than between WC and PS-CA. The association between WC and GRP-CA tends to be larger than the association of WC with PS-CA, $t(318) = 1.90$, $p<.10$. Clearly, the general expectations of our first hypothesis are not supported.

CNV-CA was significantly correlated with both EI, $r = -.35$, $p<.001$), and with EA, $r = -.30$, $p<.001$). GRP-CA was significantly associated with both EI, $r = -.27$, $p<.001$, and EA, $r = -.17$, $p<.001$. Both of these findings were predicted. While the associations of MTG-CA with EI, $r = -.25$, $p<.001$, and EA, $r = -.15$, $p<.01$, were not predicted, they did show statistical significance, and in fact, the associations of MTG-CA with the FIRO-B scales tended to be more similar to those of CNV-CA and GRP-CA with the FIRO-B scales than of PS-CA with the FIRO-B scales.

When the relative size of the correlations of CNV-CA and GRP-CA with EI were compared with the associations of PS-CA with EI, the results indicated, as predicted, that the EI scores were more a function of apprehension about communicating in less public contexts than of public speaking apprehension. Similarly, the relationship between MTG-CA and EI was significantly larger than the correlation between PS-CA and EI.

Only the correlation of CNV-CA with EA was significantly larger than the correlation of PS-CA with EA. In fact, the correlation of CNV-CA with EA was significantly larger than the association of <u>any</u> other CA context score and EA.

For WI, all of the CA context scores, except public speaking, are significantly associated with it. As with the EI and EA scale, the CA context most associated with WI was apprehension about communicating in dyads. Consistent with the two previously mentioned studies, WA did not associate significantly with any of the four CA context scores, nor overall PRCA-24 scores.

TABLE 1

INTERCORRELATIONS OF PRCA-24 SUBCOMPONENTS WITH SCALES OF THE FIRO-B
(N=321)

	COMMUNICATION CONTEXT				
FIRO-B SCALE	Group	Meeting	Dyadic	Public Speaking	TOTAL PRCA-24
Expressed Inclusion (EI)	-.27[d]	-.25[d]	-.35[d]	-.10[b]	-.29[d]
Wanted Inclusion (WI)	-.16[c]	-.14[c]	-.24[d]	-.04	-.17[d]
Expressed Control (EC)	-.23[d]	-.26[d]	-.27[d]	-.11[b]	-.26
Wanted Control (WC)	.24[d]	.31[d]	.17[d]	.14[c]	.26[d]
Expressed Affection (EA)	-.17[d]	-.15[c]	-.30[d]	-.08[a]	-.20[d]
Wanted Affection (WA)	-.01	.00	-.07	.06	.00

[a] $.10>p>.05$; [b] $p<.05$; [c] $p<.01$; [d] $p<.001$

DISCUSSION

The results of this study demonstrate a small to moderate correlation between the PRCA-24 and five of the six scales of the FIRO-B. As such, the study indicates a modest relationship between communication apprehension and people orientations. The results do not appear to support Ambler's previous explanation that students enrolled in a program developed for public speaking anxiety would be more distinguished by differences in control scores on the FIRO-B. In fact, the subcomponent of the PRCA-24 measuring public speaking apprehension was the context least associated with any of the scales of the FIRO-B.

A reexamination of the results in Table 1 may help us to understand Ambler's results. If one examines the column showing the relationships between public speaking apprehension and the various scales on the FIRO-B, it is easy to see that the FIRO-B scales most associated with PSCA are the two control scales. While these correlations, -.11 for EC and .14 for WC, are small and would account for a very small amount of variance, they are statistically significant. It is true that the correlation with EI, $r = -.10$, $p<.05$, and with EA, $r = -.08$, $.05<p<.10$, are not significantly lower, though. This would raise some question as to whether the students in the program studied by Ambler are only focally apprehensive about communicating in the public speaking situation, a question which will be probed later in this analysis.

Similarly, if we look at the column which indicates the correlations between dyadic apprehension and the FIRO-B scales, we find that all four FIRO-B scales, EI, WI, WC, and EA, which Rosenfeld and Frandsen found to distinguish reticent students from non-reticents are significantly associated with CNV-CA. One of the scales that did not distinguish between reticents and non-reticents, WA, does not show a significant relationship with CNV-CA in the present study. The same conclusion can be drawn about the associations of the FIRO-B scales with the overall PRCA-24 scores. It should also be noted that the two FIRO-B scales which Rosenfeld and Frandsen found to be most different for reticent and non-reticent students, expressed inclusion and expressed affection, are the two most associated with CNV-CA for the present study. It is true that Rosenfeld and Frandsen were trying to identify people orientations of reticents, and not apprehensives, but the commonalities of results raises the question of whether or not those identified as "communication apprehensive" are really different from those identified as "reticents". It should be noted that the results of the present study seem to identify differences on the FIRO-B control scales as playing a bigger part in identifying apprehensives (via overall PRCA-24 score) than Rosenfeld and Frandsen's data suggest for the role of the FIRO-B scales in characterizing reticents.

To return to a question raised earlier, is it reasonable to assume that the students in a program designed to assist public speaking anxious students are more focally apprehensive about public speaking? Data are available to test that hypothesis. Shortly after the data reported in the Ambler (1983) study were collected, the program on which the data was based started collecting PRCA-24 scores for students at the beginning of the course and at the end of the course. Previously, that program had used the PRPSA (McCroskey, 1970), a measure focused on public speaking apprehension, to measure change in apprehension. Since the PRCA-24 contains the four subcomponent scores for measuring apprehension, which represent not only the public speaking situation, but also the group, meeting, and dyadic context, we would expect, if Ambler's argument is accurate, that students enrolled in that program would have public speaking CA scores well above average, in relation to other students enrolled in regular speech communication classes which the program supports, while the scores on the group, meeting, and dyadic CA would not be particularly higher than those for students enrolled in the regular sections of the course. Since the data reported in the present study were collected from courses taught at the same school and program on which the Ambler study was based, this provides an opportunity to test directly whether the students in the course designed for "speech anxious" students are indeed primarily nervous about communicating in the public speaking situation or are more generally communication apprehensive.

The post-hoc analysis compared the PRCA-24 scores of 142 students in the present study (data collected in the Spring of 1983) who were enrolled in regular public speaking classes with the PRCA-24 scores of 240 students (data collected from Winter, 1982 through Winter, 1986) beginning the special speech anxious class which supports the previously mentioned public speaking classes. (The PRCA-24 has not

been used during this time period to identify students in regular classes who would find the course beneficial, but rather has been used as a measure of course effect.) A 2X4 analysis of variance was employed with two levels of type of class (regular public speaking and the speech anxiety class) and four levels (repeated measures) of CA context (group, meeting, dyadic, and public speaking). If Ambler's position that students enrolling in a program for public speaking anxiety are particularly public speaking anxious, but not as apprehensive about communicating in other contexts, then we would expect a significant interaction effect with the difference between the PS-CA scores for the two classes being greater than the difference between apprehension on other contexts for the two classes.

Table 2 reports the results of the ANOVA. The interaction effect between class type and CA context was significant, $F(3, 1140) = 5.87$, $p<.01$. To determine the nature of that interaction, the simple effects of class type for the four different levels of CA context were calculated, and that information along with the means for the different groups is presented in Table 3. The largest differences between apprehension scores for students in the two different classes are most related to MTG-CA AND PS-CA. In fact, the difference in MTG-CA scores is slightly larger than the PS-CA scores between the two classes. The sizes of the difference between classes for the group and the dyadic CA contexts is statistically significant, but clearly distinguish students in the two different classes less than does apprehension about communicating in meetings and speeches.

TABLE 2

ANALYSIS OF VARIANCE FOR THE EFFECT OF CLASS TYPE AND COMMUNICATION CONTEXT ON APPREHENSION LEVEL

SOURCE OF VARIATION	SS	df	MS	F	sign.
BETWEEN SUBJECTS		381			
Class (Anx. or Reg.)	8504.01	1	8504.01	169.53	.01
Subj. w. groups	19061.38	380	50.16		
WITHIN SUBJECTS		1146			
CA Context	9084.95	3	3028.32	246.89	.01
Class x CA Context	215.85	3	71.95	5.87	.01
CA Context x swg	13982.94	1140	12.27		

These results, while tending to support the argument that the students enrolled in the special speech anxiety sections are characterized by their reported level of apprehension about public speaking, also indicate a relatively high level of apprehension about communicating in other contexts. While it may be possible that there are students enrolled in those classes who are focally apprehensive about public speaking, the relatively large size of the differences in

apprehension about other CA contexts between the two classes in the post-hoc analysis suggests that this portion of the student audience may be much smaller than we might have previously predicted, and that for many, if not most of those enrolled in classes for "speech anxious" students, there is some element of a more general trait tendency toward communication apprehension.

TABLE 3

MEAN SCORES, F-RATIOS, AND EFFECT SIZES OF CLASS TYPE FOR COMMUNICATION APPREHENSION CONTEXT SCORES

	COMMUNICATION APPREHENSION CONTEXT			
CLASS	Group	Meeting	Dyadic	Public Speaking
Means				
Regular Public Speaking (N=142)	15.15	15.99	13.55	19.61
Speech Anxiety Section (N=240)	19.58	21.70	17.45	25.18
F-Ratios & Alpha Levels	77.18 < .01	134.19 < .01	62.57 < .01	127.16 < .01
Effect Size (Intraclass Coefficient of Correlation, RI)	.17	.26	.14	.25

Short of comparative studies between treatment programs examining the percentage of students more focally apprehensive about given communication situations versus those who are more generally apprehensive, there is no way of testing Ambler's hypothesis that the purpose of the different programs will determine the nature of the student audience, though the argument seems plausible. Comparative studies of this nature are needed, even though the logistics necessary to achieve this goal may be complex. Such efforts should provide answers to two major questions: (1) What are the special characteristics of the students who enroll in the differing types of treatment programs? and (2) What is the relative effectiveness of the differing programs in facilitating change for the differnt types of student audiences?

In the previously mentioned post-hoc analysis, we were not only able to compare PRCA-24 scores between the regular public speaking classes and the speech anxiety sections, but FIRO-B scores were available for all of the same subjects. When a comparable analysis was done between the two classes using type of class as a fixed variable and the six different FIRO-B scales were viewed as repeated measures, a significant interaction effect, $F(5,1900) = 11.44$, $p<.01$, between class type and FIRO-B scale was obtained. When we examined the simple effects of class type for different FIRO-B scales, five of the six scales, EI, WI, EC, WC, and EA, were significantly different for the two different classes. In calculating the comparable intraclass coefficient of correlation, RI (Kerlinger, 1973, pp. 231-232) for the FIRO-B scales, we found that the amount of variance between type of class and FIRO-B scale ranged from .01 for EC to .045 for WC for the five scales that showed a significant correlation with type of class. In comparison to the RI values for CA context with type of class, which ranged from .14 for dyadic CA to .26 for public speaking CA, these figures are quite small. Thus, the PRCA-24 provides a superior instrument, in comparison to any combination of FIRO-B scales, for recommending students to the special public speaking class for speech anxious students.

While the data assembled above would seem to suggest that the FIRO-B has limited value with regard to training programs for students with high CA, it has been of sufficient value in the special speech anxiety class for which the data in this study have been collected that we continue to use it. Its purpose has not been to identify students who would qualify for the class, but rather to provide insight for students who are taking the class concerning the potential underlying reasons or bases for their apprehension about communicating. Students are asked to complete the FIRO-B, their results are provided for them, an interpretation of those results is provided, along with the potential relevance to apprehension about communicating, and they are asked to write a self-analysis paper in which they discuss their accuracy of their scores in predicting their real communication behavior and indicate whether their predicted relationship orientation scores are related in any way to their apprehension about communicating. While not all students find this helpful assignment, a sufficient number do that the program has retained the assignment. The results of the present study at least partially affirm the value of continuing this practice.

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